FESSENDEN'S

SILK MANUAL

AND

PRACTICAL FARMER.

Devoted to the Culture of Silk, Agriculture, and Rural Economy.

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BOSTON, NOVEMBER, 1835.

FACTS AND OBSERVATIONS
RELATIVE TO THECULTURE OF SILK.

THE following facts are from a slip cut from a New York newspaper, but the date nor the title not being preserved, we cannot give credit to the source from which we have derived it.

About five years ago, William Gillespie, Esq., of the town of Montgomery, Orange County, (N. Y.,) sowed seed for a nursery of the white mulberry, (morus alba) for the purpose of the culture of the Silk Worm. The ground occupied by the nursery is about four square rods. This small lot yielded last summer 175 skeins of sewing silk, rivalling in softness, strength and beauty, the best imported specimens of the same article. These skeins, with a sufficient quantity of tow for a pair of stockings, would command in market $10. The whole labor expended in the culture, Mr Gillespie estimates at $2 — making the product of four square rods $8. One acre cultivated this way would yield $320, besides the expense of the labour.

Farmers might clothe their wives and daughters with silk of a good quality at less expense than it now requires to clothe them in fine cotton. It is estimated that $5,000 worth of sewing silk is sold annually in Orange County alone, and the whole sale of the article in the State of New York may probably be estimated at 150,000. All this would be saved in our country by the extension of this very profitable branch of husbandry so as to supply the home consumption. Much of the labor too can be performed by small children who would otherwise be idle, and thus early habits of industry would be created.

The whole process is simple, and a knowledge of it easily acquired. After the middle of May, the egg of the silk worm is brought from the bureau, and exposed to the warmth of the air, but not to the rays of the sun. Early in June the term of incubation expires, and the small silk worms make their appearance. They are now to be fed with mulberry leaves, with which they are supplied twice a day, the leaves to be scattered in the enclosure where they are kept. In about six weeks they attain their full growth, when they are of a beautiful golden color. A small quantity of leaves supplies them for the five first weeks; the sixth week they require an abundant supply., Mr Gillespie informs us, that during this week when a stranger visits their apartment, they leave off eating, raise their horn and give plain indications that they know him to be strange.

After feeding about six weeks they quit eating and are prepared to commence spinning. Oak or walnut leaves, dried in the sun so as to be curled are now thrown into their enclosure; they lodge in the folds of the leaf, and begin to spin from their own bowels — first the tow by which they attach their web to the leaf, then the thread, which they form into a perfect web, so as to shut themselves closely within.

The larvæ or worms enclosed in the balls, that are intended for propogation, cut their way out of the silken cell and escape from their own prison, in the form of a butterfly, with beautiful variegated wings; white paper is placed under them, on which the egg is deposited; one butterfly will

deposit two thousand eggs. These papers, with the eggs are laid away in a chest or desk until the following spring, when the process above described is again repeated.

After this interesting insect has furnished the fine material, the tow is picked off the balls, which are thrown into hot water and a stick is passed among them, to which the ends of the threads attach themselves. For sewing silk, forty of them are laid together and reeled. The thread thus composed of forty fibres, is twisted hard on a large spinning wheel, then doubled and twisted again, and wrought into skeins. The whole process of manufacture is completed by scouring in the same manner as woollen yarn to detach the glutinous substance, which the worm employs in the fabrication of its thread.

From the Horticultural Register.

SILK CULTURE IN INDIA.

Roxbury, November 19, 1835.

My Dear Sir,—Having recently been reading Milburn's Oriental Commerce, I was much interested in the account he has given of the silk culture in India: and as it contains some valuable information, which I do not recollect to have seen in any other work, on a branch of rural industry, which has claimed so much of your attention, and is becoming so important to this country, I enclose several extracts for publication.

The mode in which the mulberry plantations are managed, is novel, and well worthy of experiment; for if it will not enable us to obtain, as is there done, six crops of silk in a year, it is possible such advantages may be derived, as to induce its adoption, — especially in the Southern States.

The two species of silk-worms, which are described as peculiar to Hindostan, might be a valuable acquisition; especially that of Arrindy, as the Palma Christi, on which it feeds, flourishes throughout the United States.

The descriptions of the various kinds of silk produced in Bengal, and the mode of ascertaining their qualities, may be found useful to those who have established manufactories in this country, and as yet rely on the raw silk of India for their looms. With great esteem,

your most obedient servant,

H. A. S. DEARBORN.

EXTRACTS.

Silk Worm. — "In Bengal, the largest and best cocoons are preserved for the grain, and preserved in bags suspended to the roof of the hut of the peasant. When the insect is ready to burst its prison, a few balls are placed in a large basket on one shelf of a frame, provided for the nurture of of the worm. The frame in common use, consists of sixteen shelves, placed in a shed upon vessels filled with water, by way of precaution against ants. After the moths quit their covering, attendance is required to remove the males as soon as their functions have been performed, and the females when they have produced their eggs. The basket is carefully covered with a cloth, and in a fortnight the worm quits the egg. They are first fed with mulberry leaves, chopped very fine; as they advance in their growth, they are dispersed into more baskets, on the several shelves of the frame, and are supplied with leaves, cut into larger pieces, and latterly with whole leaves, until the period when the insect quits the food. As soon as it recommences eating, branches of mulberry trees are thrown on with the leaves upon them, and the insects eat with eagerness, and soon fill the baskets on the whole number of shelves; they arrive at their full size in a little more than a month from their birth, and changing their skins for the last time, are disposed to begin their cones. They are now removed to baskets, divided into spiral compartments, where they spin their webs, and cover themselves with silk. When the cocoon is completed, a few are set apart for propagation, and the rest are exposed to the heat of the sun, for the purpose of killing the chrysalis,"

"The peasants sell the cocoons to the filatures, or winding houses, most of whom are in the employ of the East India Company."

Cultivation of the Mulberry Tree. — The following is the mode of propagating the mulberry tree. The waste land is opened with the spade in the month of April; good soil is brought and enough is thrown on to raise it one cubit.* The ground is well broken with the plough, and levelled with an implement, which in form resembles a ladder, but which supplies the place of a harrow. The mulberry is planted in October; the slips are cut a span† long, thrown into a hole, covered from the sun, and are continually watered, until at the end of a fortnight they begin to vegetate. They are then transplanted into the fields, in holes, distant a span from each other, and nearly one span deep; four or five cuttings are placed obliquely, in each hole, which is then filled up, so as to cover the slips with a finger‡ of earth, closely pressed down. As soon as the plants appear, in December or January, the field is weeded. In April, when they are grown to the height of a cubit, they are topped, so as to leave a stem one hand§ high; otherwise

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* The cubit of Bengal is eighteen inches.

† The span is nine inches.

‡ The finger is three fourths of an inch.

§ The hand is three inches.

it is thought that the leaves would be bitter and hard, and that the worms would refuse them. A hand-hoeing is now given, and a fortnight afterward, the leaves are ready for use. The plant is then cut down a little above the root, and the silk worms are fed with the leaves; the field is weeded, if necessary, and another crop is obtained in June, and a third in July; but the leaves of this last crop only are gathered without cutting the stem, because that operation at so late a season, would, it is apprehended, injure the plant. The field is again weeded, and a fourth crop is ready in September; after gathering it, the ground is ploughed several times, and levelled with the implement above mentioned. In November, a hand-hoeing assists vegetation, and accelerates the best crop, which is cut in December; this is followed by a hand-hoeing and weeding, and is succeeded by another crop in March. The same course recommences, and the field, if sufficiently attended and cultivated, will continue productive during many years."

The Silk Worms of Tusseh and Arrindy. — "There are two other kinds of worms, which produce silk in Bengal, viz. the Tusseh and Arrindy worms; the former are found in such abundance, over many parts of Bengal, and the adjoining provinces, as to have afforded to the natives, from time immemorial, a considerable supply of a most durable, coarse, dark-colored silk, commonly called Tusseh silk, which is woven into a kind of cloth, called *Tusseh dooties*, much worn by Bramins, and other sects of Hindoos. This substance would, no doubt, be highly useful to the inhabitants of many parts of America, and the south of Europe, where cheap, light, cool, durable dress, such as this silk makes, is much wanted. This species cannot be domesticated."

"The Arrindy silkworm is peculiar to the interior parts of Bengal, in the districts of Dinagepore, and Rangpore, where the natives rear and breed it, in a domestic state, as they do the silkworm. The food of this kind consists of the leaves of the common *Ricinus*, or *Palma Christi* plant, which the natives of these districts call Arrindy, and is abundantly reared in all parts of India, on account of the oil obtained from the seed. Feeding these caterpillars with these leaves, will therefore make it doubly valuable, where they know how to spin and manufacture the silk. Their cocoons are remarkably soft, and white, or yellowish; and the filament so exceedingly delicate, as to render it impracticable to wind off the silk; it is therefore spun like cotton. The yarn thus manufactured, is wove into a coarse kind of white cloth, of a seemingly loose texture, but of incredible durability, Its uses are for clothing, for both men and women; and it will wear constantly ten, fifteen, or twenty years. The merchants, also, use it for packing fine cloths, silks and shawls. It must, however, be always washed in cold water; if put into boiling water, it makes it tear like old rotten cloth."

Kinds and Qualities of Raw Silk. — "Bengal raw silk, is divided into two classes; the reeled according to the old method, commonly called country wound, and that reeled according to the new, or Italian method. The places where the former is manufactured, are Comercolly, Jungypore, Rungpore, and Banleah; and those where the latter is prepared, are Comercolly, Malda, Radnagore, Jungypore, Rungpore, Banleah, Cassimbuzar and Gonatea.

The leading point which determines the value of Bengal raw silk, in cleanness, or, being free from knibs, or knots, known amongst the manufacturers, by the appellation of "*foul*;" evenness of thread is also most essential.

To judge if silk be clean, the best mode is to open the skein, and stand with your back to a window, so that you look down the extended silk in the same direction that the light falls; by this means you will easily perceive any *foulness* that exists, and a very little practice, will enable any person by a mere *coup d'oeil*, to judge accurately upon this most essential quality of Bengal raw silk.

The different degrees of fineness and coarseness, are denoted by the letters A. B. C. Silk of 4—5 cocoons, is called A. No. 1; of 6—8 cocoons, A. No. 2; of 8—10 cocoons, B. No. 1; of 10—12 cocoons, B. No. 2; of 12—14 cocoons, and 16—18 cocoons, B. No. 3; of 18—20 cocoons, C. No. 1; of 20—22 cocoons, C. No. 2; and 22—24 cocoons, &c., C. No. 3. All filature silk, or that which is reeled in factories, is included within the above named letters and numbers; but silk which the natives reel by hand, is much coarser, and is marked by the letters A. B. C. D. E.

The Banleah filature silk, is inferior in fineness to Radnagore, or Cassimbuzar filature silk of corresponding letters, and Comercolly filature silk exceeds these."

ROBERT'S SILK MANUAL.

We have been favored by the author, with a copy of a work entitled "*A Manual, containing directions for sowing, transplanting and raising of the mulberry tree together with proper directions for propagating the same by cuttings, layers, &c. &c.* As also *instructions for the cultrue of silk:* To which is added calculations shewing the produce and probable expense of cultivation of from one to ten acres, as tested by actual experience, by

EDWARD P. ROBERTS, *Editor, Farmer and Gardener.*

Immediately after the title page, the reader of this Manual is presented with a handsome plate, headed *representation of the different ages of the silk worm.* In this the insect is exhibited as feeding on a branch of a mulberry tree, and the different appearances of the wonderful worm in all its metamorphoses are pleasingly and faithfully delineated.

The following extracts from the preface to this work will give our readers a better idea of its plan and execution than could be done by any of our observations. The author states that in the compilation of this Manual "he is indebted to articles in the Encyclopedia Americana; Lardner's Cyclopedia; the Edinburgh Encyclopedia; Kenrick's Orchardist; Observations on the Silk Worm, by William B. Buchanan, Esq. published in 1828; the Treatise on the Culture of Silk, published in 1830, by John D. Homergue and Peter S. Duponceau, Esqs.; Cobb's Silk Manual, published in 1831; the Trade and Navigation of Great Britain, considered by Joshua Gee, published in 1760; the letter from James Mease, transmitting a treatise on the rearing of silk worms, by Mr DeHazzei, of Munich; and the Manual of the Secretary of the Treasury on the same subject; both of which last works were printed by Congress, in 1828; the various articles respectively in those excellent periodical Journals, Fessenden's Silk Manual and Practical Farmer; the Silk Culturist; the Silk Worm; essays in the Farmer's Register; and various other periodicals. * * * *

"The work of Count Dandolo, which forms the superstructure of the two Congressional documents, previously noticed, is so full upon every head connected with the subject, that after reading every thing within his command, the Editor's only difficulty seemed to be to seperate what might be termed the purely scientific and philosophical parts, from those of a more practical character, with a view of presenting to the agricultural community, a *Manual*, wherein all might derive the necessary information to carry on the silk culture in its every branch and department from the sowing of the mulberry to the reeling of the silk. How far he has succeeded he will not pretend to say, but shall leave that to others to determine, being content himself, in the declaration that he labored with a singleness of intention to promote what he considers a great and growing interest of his country."

We have not yet had time to read this work, attentively, but from the slight perusal we have been able to give it, we believe it will prove a valuable acquisition to the stock of information already in possession of the public.

REV. JOHN TODD'S ADDRESS

DELIVERED BEFORE THE AGRICULTURAL SOCIETY, *at Northampton, October* 7, 1835.

There seem to be some obvious advantages in calling a man to address you on a subject about which he knows nothing. If a man understands a subject, you feel bound to give him your close attention, — to weigh what he says, — and, it may be, yield some prejudices, or act in conformity with his advice. Not so in the other case: if you bestow little or no attention, you feel that he deserves no more; if you feel that here or there your principles or practice are reproved, you can comfort yourself that *he* does not understand the subject. All these advantages, and many others, equally great, will be abundantly realized on this occasion. There is one thing, however, which I hope you will remember; and that is, that if I do not throw out any hints which are of any worth, it will not be because I do not wish to do it.

It is obvious to every man, whether he be a keen observer or not, that our farming improvements are very far from keeping pace with the day. Our manufacturers spare no study, no travel and no expense, to improve their machinery. If we have not machinists who can make this or that part of the machinery, they send to Europe where there are. If we have not men who can dye this or that color, or weave this or that beautiful pattern, they will search every nook and corner of the old world, till they are found. And men have been smuggled away from England in casks and hogsheads who are now in some of our factories. The man who can simplify a machine by taking out a single wheel, is rewarded with a fortune. But when and where do you find the farmer or a combination of farmers who take equal pains to make improvements? Is it not a kind of received maxim, that little or no improvements are to be made in farming? And as a profession, is not that of farming supposed to be where, or about where, it is to remain? As you pass over the beautiful hills and valleys of New England, and see not more than a half, or perhaps a third of the land subdued; barren hills, bushy swamps, and fern pastures, —

there not something forbidding in the profession of a farmer? And do not our young men, for the most part, turn away to almost any thing, rather than be farmers? Why, they had rather be pale-faced, pennyless clerks in our cities — rather make their home on the mountain waves — rather hide in the forests of the west, than to settle down as farmers in New England.

There is no banner that waves upon the deep, which waves over prouder hearts, than our own stars. There is no ship that climbs the waves, that leaps off with a freer gait, than our own.— And there is no man on the face of the earth, that can lift up his head with more real respect, than a citizen of these United States. But the proudest spot, (if we may talk about pride,) on this or any other continent, is New England. You may talk about the mighty west — or the lofty character of the south — but go where you will, there is no spirit that walks this earth like that of the Yankee. Do you hear the fall of the mighty tree in the wilderness? depend upon it, it falls by the Yankee's axe. Do you find the stream turned away from yonder mountain, and apparently made to run up hill, and increase as it runs? it is his hand that digs the channel and guides it. Do you find the man near the southern pole who dares go and look into the mouth of the whale? he is a Yankee; to be sure he cannot make discoveries in the moon, and find mountains of precious stones there; but if you could make him believe there were such things there, I verily believe he would seek a ladder by which to get there, and then with a patent for the invention, draw it up after him.

Now for one, I not only glory in being a New England man, but I want to transmit this character down to posterity. But I believe we are in fault in one respect, viz: we suffer too many of our young men to go off and leave us. We raise up a promising son, upon whom we set our hearts, and if he has any share of spirit and enterprise, he is away, and New England is no more his home. A few remain, — not one-fifth of what the soil would support, not enough to raise what we consume, but enough to keep our farms in always the same condition as they have been for generations. Our hills will continue barren, and the mica will shine in our rocks, and whole districts will continue swamps and waste lands, so long as our young men all go off. Those who would make first rate men are pushed off, and their enterprise is all lost to us. Now if I could throw out a few hints which would be the means of keeping our young men at home, I should not only promote the interest of the farmer, but the whole interests of New England, and of the nation. *Let us look, then, at the causes which carry our young men away.*

There is one trait in the character of New England people peculiar to them. It is the ardent, unquenchable love of money. Money the Yankee must and will have. On that he fixes his eye with a gaze ever burning and eager.— Sometimes you will find him chasing the whale, trapping the beaver, on the raft on the St Lawrence, on the pedlar's cart among the mountains, or watching the machinery which every moment turns out a button, or a roll of cloth. Sometimes you will see him seeking money by marriage at a distance — and I believe this is the only way in which he honestly acquires it, while at the same time he loses all self-respect. This leads him to inventions and patents, and I regret to say it, sometimes to a species of dishonesty which is well known by the name of wooden nutmeg selling. It also leads to many useful inventions; and in the words of the ballad which I lately heard beautifully quoted,

"If we the wooden nutmeg make,
We made the cotton gin, Sir."

Now many, who most egregiously mistake our character, suppose that all this springs from a selfish, a cold, an avaricious disposition; that it would be impossible for a race, in whose bosoms there was a particle of any thing but *avarice*, to be so greedy for money. But this is not so. The Yankee miserly! What mean these schools, these colleges, these seminaries of learning scattered over all New England — the glory of this or any other land! Is there a spot on earth where money is so freely and so abundantly given to these and to kindred objects, as in New England! Miserly! Shew our community a great and noble enterprise of a public nature, and see if there be a people on earth who will be so generous — more noble — more sublime in their acts.

And yet it must be confessed that the Yankee loves money, and that he will have it. And what is the principle which moves him in all this? I will tell you: *it is an inborn, unquenchable, irrepressible desire to be* INDEPENDENT. Our sons, from the very cradle, breathe the air of independence — and we teach them to owe no man — to depend upon no man. It is to gratify this love of independence that they rake the ocean and the earth for money. Now I would not have them possess less of this spirit; but I would shew them that they can gratify it by staying at home. Let the enterprise which is expended in subduing the forests, and enduring the fevers of our new country, be expended upon the waste hills and unsubdued valleys at home, and New England would be a garden, and we could have a population, I hesitate not to say, of ten to one. Try then to raise the standard of farming, by subduing our soil, and you keep our youth at home. Till this is done, and till our young men can see that they can live

here and be independent, they will go off. They ought to go off. Now there is a great mistake among farmers, which has a bearing on this point. And that is, *they covet too much land.* Almost all our farms are probably from four to ten times too large. A farmer never feels that he has got land enough. He adds field to field, does not half subdue or manure what he has got, and still wants more. One of the most productive and profitable farms I ever saw, contained but fourteen acres. It was every inch subdued, improved and manured; and the owner is what we call a very thrifty, if not a rich man, — while his neighbor, who skims over three hundred acres, and works full as hard, grows poor. By proper management, I am satisfied, every acre of land which is fit to raise corn upon, *can* be made to yield one hundred bushels to the acre. Is it not better to put the manure and care and labor upon it, and raise the one hundred bushels, than to spread the same over four acres, and thus drive away three of your sons to the west? As long as farmers feel that they must have so much land, they will be in debt, will hate Life Insurance Offices, will never see what the earth can be made to yield, and never have New England filled up with a great body of intelligent farmers. As things now are, what is the process? I will tell you. A man owns one of our large farms. It is paid for. He raises up a large family. The girls are married off, and he gives each one her portion. He himself dies, and his farm falls to his five sons. One of these five takes the farm, and agrees to pay the other sons their shares. They go off to the west, and return no more. He undertakes by economy and industry to keep *all* the farm, and send four-fifths of its value to the west. By and by, he finds he cannot do it as fast as he agreed to do it. He goes to the Life Insurance Company, or somewhere else, mortgages his farm, and starts anew to pay for it. All his life he toils — pays interest — thinks the farmer has a very hard row to hoe, — and it is not till the close of his life that he gets free from debt. When he dies, the same process has to be gone over again, and thus, about every generation, we send off four-fifths of our sons to the west, and then send four-fifths of the value of our lands after them. Now this is poor policy; and I sometimes wonder how it is that our farms are in any condition that is tolerable; for their worth, many times over has been sent away to the west. If, instead of this, our farmers would divide up their farms, and make every acre yield all that it can be made to yield, our towns would not have that appearance of age and decay which too many of them have. 'Praise a great farm,' says the immortal poet of Rome, 'but cultivate a little one.' I have noticed that men as they grow old, seem to want more and more land, and seldom do you find a man who feels that he has enough. I know they talk of the fertility of the west, and the beautiful land to be found there. And I know, too, that a young man going out there, if he do not die under it, will in a few years become thrifty. And why? the process is easily described. He goes to the wilderness, purchases his land, lives in his log cabin, sleeps on the floor or more likely on the ground, eats upon a slab pinned up into the logs, and eats what comes to hand, wears what he can get, and so he lives, working early and late, and it would be wonderful indeed if he did not gain property. And so would he here. Let a young man take the poorest farm you can name, and labor on it as hard, and live just as he does at the west, for fifteen years, and he will be rich here. It is not so much the *land* that makes the difference, as it is difference in the manner of living, between the west and the east. I was struck while riding in the stage in listening to the conversation between two farmers, the one from Illinois, and the other from the state of Maine. The western man was describing his country, and the fertility of the soil, contrasting it with New England. 'Why how much corn can you raise to an acre?' says our man from Maine. 'I can raise all of seventy bushels with all ease.' 'And how much do you get for it a bushel?' 'Nine-pence a bushel at my door.' 'Well,' says the Maine farmer, 'I can raise three hundred bushels of potatoes on my land, and get twenty cents a bushel at my door.' 'Aye, but you have to dig them.' 'True, and don't you pick and then shell your corn, and after all get but twelve and a half cents, and only seventy bushels on an acre?' I repeat, with the *same* economy, and the same industry, a young farmer here can get rich as easily as at the west. Whether they will practice equal economy and industry, is more than I can say. But let the fashion once prevail of having smaller farms and having them better cultivated, and you will be surrounded by your own sons, instead of large landholders, and a floating population who hire themselves out to cultivate it, and who own no land.

Another reason why our young men go to the west and leave us, is, that there is one period in a farmer's life, which is a severe one for a Yankee to bear. I allude to a certain period in every farmer's life, who does not inherit property, *when there is a severe struggle between thriftiness and poverty.* Every farmer has known that there is and must be such a period and such a struggle. Like a ship mounting up a high wave, every stick of timber seems to groan and creak, and for a moment, just as she is on the point of gaining

the top, she seems to hang, doubtful whether she will go up or down. Just so with a New England farmer. Those who get over this point, do well, and thrive, but how many sink away and never surmount it! Our young men, though they do not philosophise about it, know that such a time is before every young farmer, and rather than to meet it, they will go and meet it away from home, in the forests. It is not that they will not there meet it, as well as here; but it is, that they shall meet it away from home, and not under the gaze and the prophecies of their neighbors. Now what I want, is, that our young men should calculate to meet this period of twilight, and not feel that the moment it begins to come, they must pull up stakes and go to the west. I want, too, that those who have passed through this hard time, should encourage and aid others who are coming into it, and not encourage the young farmer to go off, and leave his land for you to purchase. It does and must come to this, — that if our farmers must have large farms which they do not half cultivate, we must have a thin population — we must send away the flower of our youth, we must have poor people who go out at day labor and get a precarious livelihood — we must have not so much raised by three-fourths in a given district, and we must have our farms mortgaged, and our farmers in debt.

One more reason why our young men emigrate — and that is, that farming is not looked upon as so reputable a business as it is, and as it ought to be. I know not why it is, or who set the fashion, that a feeling prevails with some, that farming is not as respectable employment as any that can be named. For myself, I attribute it to the fact, that with all their good qualities, farmers are not true to themselves in some respects. They do not cultivate their minds sufficiently. For example, some years ago, a student in his walks discovered a farmer laying a stone wall. This was in Milford, Con. The stone which he was laying up, the student at once saw was marble. In a short time he discovered a splendid quarry, from which stones have since been worked. Now all the farmers in that place had been making walls of marble for forty years — and yet no one of them had the sagacity to discover it. But had they but a very small portion of a reading spirit, they would have seen it at once.

You have frequently seen men leave my profession and go to the farm, — and some indeed without leaving the profession. And they almost invariable, as you have noticed, succeed and grow rich. The reason is, that every particle of mind which is cultivated is of use in farming. It is a mistake to say that ignorance will do on a farm. Were Daniel Webster now to leave his public duties and go to farming, I should have no doubt but he would succeed, and this, because he would bring his powerful mind to bear upon it; and it would be useful. I see that this is beginning to be felt, and that some of our farmers are beginning to read, to write, and to commuicate their experience to their neighbors. And I wish this might become more and more universal. Let our farmers write, as some do, for the New England and the Genesee Farmer, and no one would hold any feelings towards the profession, except those of respect. Let the profession once be properly respected, and our young men will seek it. And the way, and the only way, to have respect, is to deserve it by having cultivation of mind. It is mind, and it always will be mind, that men covet more than all other things; and that can be obtained only by cultivation. You will not understand me to say that the farmer in New England is behind the rest of the community in general intelligence; all who have addressed a city audience and a country audience, know better. But I want to have the standard much higher than it now is.

I have other reasons for keeping our young men at home besides the good of New England. From my soul, I do wish we had ten times our present number of farmers! You know the history of the last year. It is decided that in our cities the mob rules, and the laws are cobwebs. It has been decided that to horsewhip a clergyman in the streets shall cost sixty dollars; for a black man to horsewhip the chairman of the selectmen, only thirty dollars; and for common men to destroy property and beat and kill one another, it shall cost nothing! Look forward, and what is before us! There is not a city in this land which the mob cannot rule when they please and as they please; and there is an end to law, when even a neighborhood chooses to nullify it. Who is surprised to read in a newspaper even innocent men are *Lynched*, as it is called, abused, degraded, dishonored, and yet no law will reach them to protect his life, or to punish the transgressors. There is one class of men upon whom we can as yet rely. It is the same class that stood on the little green at Lexington, — that gathered on the heights of Bunker Hill, and that poured down from the hills of New England, and which were the life blood of the nation when the English lion was ready to devour it — I mean the farmers of New England. They were never in a mob — they were never found trampling on law and right. Were I to commit my character to any class of men, — my life when in danger, — my family, and my country's safety, it would be to the farmers of New England. They are a class of men such as the world never saw, for honesty, intelligence, and Roman virtue, sweetened by the Gospel of God. And when this nation

quakes, they and their sons are those who will stand by the sheet-anchor of our liberties, and hold the ship at her moorings till she outrides the storm. Why cherish New England so? Why keep her sons on her soil? Because God has given her a heritage sufficient, and our sons need not wander away from the graves of their fathers. They may be free, independent, and rich here: and here they certainly will be virtuous and happy. Here sleep our fathers! names that need not to go to fable to become illustrious; no changes in time can obscure their glory! Shall we not love and stay by the land which contains the dust of such men! On these hills and through these valleys there ever will be industry and temperance, iron sinews and noble hearts; shall we not encourage our sons to stay and drink the pure waters and breathe the free air which God has poured over this soil? With her schoolhouses, her academies, and colleges, New England can never have any other than a cultivated mind — a population which will ever stand high in the scale of manhood, the whole world being judge. Her sons have already thrown a deathless glory over her, and I doubt not, will yet do wonders for the good of man. Think of these blue hills! — are there any like them? Think of these sweet brooks and valleys! — are there any like them? Think of these villages; these sons and daughters; think of these schools, these Sabbaths, with a ministry unchallenged the earth over, these temples of God so frequently blessed with the visits of the angel of mercy — think of New England as she has been — as she now is — as she may be! — and say where is the spot on the face of the earth, that will bear comparison with her! And where is a spot for your sons to spend their pilgrimage on earth so safely, so pleasantly, so usefully? O could I reach the ear of our young men in New England, I would say to them: Here is land enough — take it. Here is enterprise enough, and here is the sheet anchor of this nation; stay by the sepulchres of your fathers; stay by the soil which none but freemen may tread; stay by the fountain which is for the salvation of the land; and when you have covered our soil, and millions swarm here, then go out and seek other homes. But, above all, I would say, whether you stay here, or go away, remember that New England is your mother, and never act unworthy of your parentage!

[For Fessenden's Silk Manual.]

BOUNTY ON REELED SILK.

The Legislature of Massachusetts, at its last session, passed a law allowing a bounty of 50 cents on each lb. of silk reeled in the State, from cocoons produced by worms *raised in the State;* the act to continue in force *two years*. If the intention of the legislature was to encourage the reeling of silk, they have not adopted the mode which, *under the circumstances, can be the least possible encouragement.* If there was already any considerable quantity of cocoons raised in the State, or even the means of making them, and they remained unreeled *for want of skill only*, such an act of the Legislature might induce persons to attempt the reeling of it. But the fact is, (and perhaps the Legislature were deceived in this particular,) there is not, — I speak the result of diligent inquiries made for the article, for the purpose of reeling, — there is not, as I think, one thousand pounds of cocoons made this year in the whole Commonwealth. That is probably a large statement. This would make from 100 to 125 lbs. of reeled silk, and if the whole were reeled and the bounty paid on it, it would draw from the Treasury the enormous sum of 50 to $62 in bounty. But the above is, no doubt, an over-statement, and besides the silk is in the hands of small growers, who have from 10 to 20 lbs. Being referred to a man who was said to be one of the largest growers in one of the largest counties, I found on application that he had a crop of 4 bushels or about 40 lbs. Another man to whom I applied for 100 lbs. answered that so much was not raised in ten miles of country round. One person I have found to have about 100 lbs., perhaps the single instance in the State. Now the whole of this silk would not pay the price of ten reels, (the net profit of it reeled,) at a cost of $25 a reel which is the price. And every man knows that the quantity cannot be materially increased in two years, for it must take that time, at least, after planting trees, *to begin to feed the worms on them;* and there not being trees planted in sufficient numbers to increase to any great extent the stock of cocoons, the expectant of the bounty must wait for his trees to grow. But, alas! so soon as he gets food for his worms, the act dies, and he cannot expect any encouragement in the shape of bounty on his reeled silk. I think I could safely engage to pay all the State bounty this year for $20. The next it may be a little more. But if it were $10,000 it would not encourage the reeling, for the reason stated, that it lasts only two years, and the necessary preparation can not be made in that time.

In the present state of the business, therefore, the bounty should be continued five years at least on reeled silk, and a premium should also be paid to the raiser, that is, a bounty on the cocoons, so that a supply should be raised with which the reeler may work.

The Legislature, besides, to encourage the early growing of trees, should have incorporated all companies asking for a charter, at the beginning of their late session in September. Then we might have had extensive plantations made this fall, which would have made a difference of a whole year in the use of the leaves over those planted in the ensuing Spring, as those then planted cannot be gathered in the next Spring after, but must be let alone for two years, while those now planted may be gathered in the second year.

It is to be hoped, if there is any serious intention of promoting the culture and reeling of silk in this State, that some different means will be adopted by the Legislature speedily for doing it, and that in the coming winter a change will be made more likely to effect the object.

BOMBYX.

The Cambridge (Md.) Chronicle says, the crop of rice planted by Major Leary, near that place, has grown vigorously and *matured completely.*

The wood of the mulberry tree is used for many purposes. Being compact, pliant, and hard, and capable of receiving a good polish, it is sought by upholsterers, turners, and carvers.

[From the Highland and Agricultural Society of Scotland.]

ON THE POINTS BY WHICH LIVE STOCK ARE JUDGED.

BY MR JAMES DICKSON, CATLLE DEALER.

Were an ox, of fine symmetry and high condition, placed before a person not a judge of live stock, his opinion of its excellencies would be derived from a very limited view, and consequently from only a few of its qualities.

He might be pleased with the tint of its colors, the plumpness of its body, and the smoothness and glossiness of its skin. He might observe and admire the beautiful outline of its figure, for that might strike the most casual observer. He might be even delighted with the gentle and complacent expression of its countenance. All these properties he might judge of by the eye alone. On touching the animal with the hand, he would feel the softness of its body, occasioned by the fatness of the flesh. But no man, not a judge, could rightly criticise the properties of an ox farther. He could not possibly discover, without tuition, those properties which had chiefly conduced to produce the high condition in which he saw the ox. He would hardly believe that a judge can ascertain, merely by the eye, from its general aspect, whether the ox were in good or bad health; from the color of its skin, whether it were of a pure or cross breed; from the expression of its countenance, whether it were a quiet feeder; and from the nature of its flesh, whether it had arrived at maturity or no. The discoveries made by the hand of a judge might even stagger his belief.

He could scarcely conceive that that hand can feel a hidden property, — the touch, — which of all tests is the most surely indicative of fine quality of flesh, and of disposition to fatten. It can feel whether that flesh is of the most valuable kind; and it can foretell the probable abundance of fat in the interior of the carcass. In short, a judge alone can discriminate between the relative values of the different points, or appreciate the aggregate values of all the points of an ox. The parts of the ox by which it is judged are called "*points.*"

We have thus seen that a person even totally ignorant of cattle may judge of some of the most apparent properties or points of a *fat* ox; but were a *lean* ox placed before him, he would be quite at a loss what opinion to pass on its present, and far more on its future condition. The outline of its figure would to him appear rugged and angular, and consequently coarse. To him the body would feel a number of hard bones, covered with a tough skin and coarse hair. A judge, on the other hand, can at once discover the good or the bad points of a lean as well as of a fat ox; because the properties of the former are the same in kind, though not in degree, as those of the latter; and, in accordance with the qualities of these points, he can anticipate the future condition of the lean ox, save and excepting the effects of accidents and disease, But, it may be asked, if a judge of cattle is a character so easily attained as is here represented, how is it that the opinion of a judge is always held in deference and is always referred to in cases of difference of opinion?

This question admits of a very satisfactory answer. Errors in the judging of cattle arise not so frequently from not knowing the points to be judged of, as from judges allowing one or more of their favorite points the power of too great an influence over the future increasing condition of the ox; and as long as there are so many points to be considered, and as most of them may be partially altered by local circumstances, a difference of opinion may exist among judges of lean stock.

Now, what are those *points* of an ox, a thorough knowledge of which is so essential to constitute a perfect judge? Could they be described and illustrated with such precision, as that they may be applied at once to every ox, in whatever condition it may be, a great advancement would be made towards establishing fixed rules for the right judging of all the domestic animals. Fortunately for the suppression of human dogmatism on this subject, Nature herself has furnished rules for ascertaining points for judgment, which can only be discovered by long and constant practice. Nevertheless, I shall endeavor to describe them plainly, and after perusing the description, I hope my readers will perceive that they are established laws of nature; and therefore unerring and applicable to every species of cattle. Like other phenomena of nature, a knowledge of them can be acquired by observation. This knowledge is the most difficult which a farmer has to acquire, inasmuch as the management of live stock is a much more difficult branch of husbandry than the cultivation of corn. And although the importance of this knowledge is acknowledged by every experienced farmer, and a desire for its acquirement is strongly felt by every young one, it is remarkable that very little is said in professed works on agriculture on those rules which guide us in judging of fat or lean live stock.

The first *point* to be ascertained in examining an ox is the *purity* of its breed, whatever that breed may be. The ascertainment of the purity of the breed will give the degree of the disposition to fatten in the individuals of that breed. The purity of the breed may be ascertained from several marks.

The color or colors of the skin of a pure breed of cattle, whatever those colors are, are always

definite. The color of the bald skin on the nose, and around the eyes, in a pure breed, is always definite, and without spots. This last is an essential *point*.

When horns exist, they should be smooth, small, tapering, and sharp-pointed, long or short, according to the breed, and of a white color throughout in some breeds, and tipped with black in others. The shape of the horn is a less essential point than the color.

Applying these marks on the different breeds in Scotland, as illustrations of the points which we have been considering, we have the definite colors of white and red in the Short horns. The color is either entirely white or entirely red, or the one or the other predominates in their mixture. The skin on the nose and around the eyes is uniformly of a rich cream color. The Ayrshire breed in its purity is also distinguished by the red and white color of the skin, but always mixed, and the mixture consists of spots of greater or smaller size, not blended together. The color of the skin on the nose and around the eyes is not definite, but generally black or cream colored. In other points, those two celebrated breeds differ from one another more than in the characters which I have just described.

In the West Highland Angus and Galloway breeds, the color of the skin is mostly black in the animals of the purest blood, although red, dun, and brindled colors, are occasionally to be seen among them.

The black color of the skin of the nose and around the eyes is indicative of the pure blood of black colored cattle, but a cream colored nose may frequently be observed among the other colors of skin.

It would perhaps be hazardous to assert, in the case of the West Highlanders, that the characters above given are the only true indications of the pure breed, for their origin cannot now be certainly determined; but the characters given will certainly apply to the purity of the blood in the Short horn and Ayrshire breeds.

The second *point* to be ascertained in an ox is the form of its carcass. It is found, the nearer the section of the carcass of a fat ox, taken longitudinally vertical, transversely vertical, and horizontally, approaches to the figure of a parallelogram, the greater quantity of flesh it will carry within the same measurement.

That the carcass may fill up the parallelogram as well as its rounded form is capable of filling up a right-angled figure, it should possess the following configuration. The back should be straight from the top of the shoulder to the tail. The tail should fall perpendicularly from the line of the back. The buttocks and twist should be well filled out. The brisket should project to a line dropped from the middle of the neck. The belly should be straight longitudinally, and round laterally, and filled at the flanks. The ribs should be round, and should project horizontally, and at right angles to the back. The hooks should be wide and flat; and the rump, from the tail to the hooks, should also be flat and well filled. The quarter, from the itch bone to the hooks, should be long. The loin bones should be long, broad, and flat, and well filled; but the space betwixt the hooks and the short-ribs should be rather short, and well arched over with a thickness of beef between the hooks. A long hollow from the hooks to the short-ribs indicates a weak constitution, and an indifferent thriver. From the loin to the shoulder-blade should be nearly of one breadth; and from thence it should taper a little to the front of the shoulder. The neck vein should be well filled forward, to complete the line from the neck to the brisket. The covering on the shoulder-blade should be as full out as the buttocks. The middle ribs should be well filled, to complete the line from the shoulders to the buttocks along the projection of the outside of the ribs.

These constitute all the *points* which are essential to a *fat* ox, and which it is the business of the judge to know, and by which he must anticipate whether the lean one, when fed, would realise.

The remaining points are more applicable in judging of a lean than a fat ox.

The first of the *points* in judging of a *lean* ox, is the nature of the *bone*. A round thick bone indicates both a slow feeder, and an inferior description of flesh. A fat bone, when seen on a side view, and narrow, when viewed either from behind or before the animal, indicates the opposite properties of a round bone. The whole bones in the carcass should bear a small proportion in bulk and weight to the flesh, the bones being only required as a support to the flesh.

The texture of the bone should be small grained and hard. The bones of the head should be fine and clean, and only covered with skin and muscle, and not with lumps of fat and flesh, which always give a heavy-headed appearance to an ox. The fore arm and hooks should also be clean and full of muscle, to endure travelling. Large joints indicate bad feeders. The neck of an ox should be contrary to that of the sheep: as the stall of the neck of the ox has no effect on the strength of the spine.

A full, clear, and prominent eye is another *point* to be considered; because it is a nice indication of good breeding. It is always attendant on fine bone. The expression of the eye is an excellent index of many properties in the ox. A dull heavy eye certainly indicates a slow feeder. A rolling

e, shewi much white, is expressive of a rest- s capricious disposition, which is incompatible with quiet feeding. A calm, complacent expression of eye and face is strongly indicative of a sweet and patient disposition, and of course, kindly feeding. The eye is frequently a faithful index of the state of the health. A cheerful, clear eye accompanies good health; a constantly dull one proves the probable existence of some internal lingering disease. The dullness of eye, arising from the effect of internal disease, is, however, quite different in character from a natural or constitutional phlegmatic dullness.

The state of the skin is the next *point* to be ascertained. The skin affords what is technically and emphatically called, the *touch*, — a criterion second to none in judging of the feeding properties of an ox. The touch may be good or bad, fine or harsh, or, as it is often termed, hard or mellow. A thick, firm skin, which is generally covered with a thick set, hard, short hair, always touches hard, and indicates a bad feeder. A thin, meagre, papery skin, covered with thin silky hair, being the opposite of the one just described, does not, however, afford a good touch. Such a skin is indicative of weakness of constitution, though of good feeding properties. A perfect touch will be found with a thick, loose skin, floating, as it were, on a layer of soft fat, yielding to the least pressure, and springing back towards the fingers like a piece of soft, thick chamois leather, and covered with thick, glossy, soft hair. Such a collection of hair looks rich and beautiful, and seems warm and comfortable to the animal. It is not unlike a bed of fine soft moss, and hence such a skin is frequently styled "mossy." The sensation derived from feeling a fine touch is pleasurable, and even delightful to an amateur of breeding. You cannot help liking the animal that possesses a fine touch. Along with it is generally associated a fine symmetrical form. A knowledge of touch can only be acquired by long practice; but after having acquired it, it is of itself a sufficient means of judging of the feeding quality of the ox; because, when present, the properties of symmetrical form, fine bone, sweet disposition, and purity of blood, are the general accompaniments.

These are the essential *points* of judging *lean* cattle; but there are other and important considerations which must claim the attention of the judge, in forming a thorough judgment of the ox.

The *proportion* which the extremities bear to the body, and to one another, is one of these considerations. The head of the ox should be small, and set on the neck as if it appeared to be easily carried by the animal. This consideration is of great importance in shewing cattle to advantage in market. The face should be long from the eyes to the point of the nose. No face can be *handsome* without this feature. The skull should be broad across the eyes, and only contract a little above them, but should taper considerably below them to the nose. The muzzle should be fine and small, and the nostrils capacious. The crown of the head should be flat and strong, and the horns should protrude horizontally from both sides of it, though the direction of the growth from the middle to the tip varies in the different breeds. The ears should be large, stand a little erect, and so thin as to reflect the sunlight through them. The neck should be light, tapering from the front of the shoulder and neck vein, with a gradual rise from the top of the shoulder to the head. The length of the neck should be in proportion to the other parts of the animal; but this is a non-essential point; though I would prefer an apparently short neck to a long one, because it is generally well covered with the neck vein.

A droop of the neck, from the top of the shoulder to the head, indicates a weakness of constitution, arising frequently from breeding too near akin. The legs below the knee should be rather short than long, and clean made. They should be placed where they apparently bear the weight of the body most easily, and they should stand wide asunder. The tail should be rather thick than otherwise, as thickness indicates a strong spine and a good weigher. It should be provided with a large tuft of long hair.

The *position* of the *flesh* on the carcass is another great consideration in judging of the ox, the flesh on the different parts of the ox being of various qualities. The part called the spare-rib in Edinburgh, and the fore and middle ribs in London, the loins, the rump or hook bone, are of the finest quality, and are generally used for roasts and steaks. Consequently the ox which carries the largest quantity of beef on these *points* is the most valuable. Flesh of fine quality is actually of finer texture in the fibre than coarse flesh. It also contains fat in the tissue between the fibres. This arrangement of the fat and lean gives a richness and delicacy to the flesh. The other parts, though not all of the same quality, are used for salting and making soups, and do not fetch so high a price as the parts just described.

A full twist lining the division between the hams, called the "closing," with a thick layer of fat, a thick flank, and a full neck vein, are generally indicative of tallow in the interior of the carcass; but it frequently happens, that all these symptoms of laying on internal fat fail. The disposition to lay on internal fat altogether depends on the nature of the individual constitution; for, it is often observed, that those individuals which exhibit great fattening *points* on the exterior, do not fill with internal fat so well as others which

want these points. On the contrary, thin made oxen, with flat ribs, and large bellies, very frequently produce large quantities of internal fat.

The first part which shews the fat in a feeding ox, is the point or top of the rump, which, in high bred animals, is a prominent point; sometimes it protrudes too much, as the mass of *fat* laid on these is out of proportion to the *lean*, and therefore useless to the consumer. This is the part which frequently misleads young or inexperienced judges in the true fatness of the ox, because fat may be felt on this part, when it is very deficient on most of the other points.

The parts, on the other hand, which are the last in being covered with flesh, are the point of the shoulder joint, and the top of the shoulder. If these parts are, therefore, felt to be well covered, the other and better parts of the animal may be considered ripe. Ripeness of condition, however, can only be rightly ascertained by handling, for there is a great difference between the *apparent* and *real* fatness of an ox. The flesh of an apparently fat ox to the eye, may, on being handled by a judge, feel loose and flabby, but a truly fat ox always feels "hard fat." With such the butcher is seldom deceived, while loose handlers give no assurance of killing well.

It is proper, in judging of the weight of a fat ox, to view his gait while walking towards you, which will, if the ox has been well fed, be accompanied with a heavy rolling tread on the ground. In this way a judge can at once come very near to its weight.

The application of all these rules and considerations to the judging of *lean* stock, constitutes the chief difficulty to the judge. An ox, in high condition, in so far as its condition alone is under consideration, can be judged of, as we have seen, by any one; and sometimes the fatness may be so great as obviously to deform the symmetry to any observer.

The superiority of a judge to others, in these cases, consists in estimating the weight, observing the purity of the blood, and valuing the points of the animal.

But in judging of a lean ox, its future condition and symmetry must be foreseen. The rules which I have attempted to describe, will, if studied practically, enable an inquiring observer to foresee these points; and in judging between a number of valuable points, it should be remembered, the purity of breeding will always insure aptitude to fatten, which, in its turn, will insure the largest remuneration for the food consumed.

Sheep, both fat and lean, may be judged of by nearly the same rules. The purity of breeding will be seen in the large, full, prominent eyes, the clean thin bone of the head and legs, and the large, thin, pricked-up ears, set on each side of the top of the head, and in the short, thick, smooth, clear hair of the face and legs.

The section of the form of the fat sheep is even more mathematically like a parallelogram than that of the fat ox. The touch of the skin is also the same in kind, and is as sure an indication of the disposition to fatten as in the ox. In regard that wool varies so greatly in the many breeds of sheep, I can only make this general remark on the fleece best suited to every breed, namely, the whole body should be well covered with wool, with the exception of the face and legs, which are always covered with hair. A large covering of wool, not only protects them against the inclemencies of the weather, and the coldness and dampness of the ground, but it supplies a large fleece to be disposed of to the wool buyer. One deviation from the rules of judging cattle, must be made while judging sheep, to which I have already alluded, namely, while the neck of the ox should be thin, that of the sheep should be thick; because a thin necked sheep is found to possess a weak spine, and is generally a bad feeder. A thin neck has thus the same effect on sheep that a small tail has on cattle. As in cattle, a drooping neck in sheep indicates a weakness of constitution, arising from breeding in and in.

Some of the rules for cattle and sheep are applicable to swine. Swine should have broad straight backs, round ribs, thin hair, thin skin, small tails, short and fine muscles, pricked ears, small and fine bones, and round and well turned shoulders and hams.

In conclusion, it is obvious that the rules for judging live stock are not founded upon arbitrary assumptions. Had no *natural* means of judging existed, man could no doubt have contrived rules to suit his own convenience; and in such a case, he would probably have chosen such as he could have most easily applied; but unless they could be applied to *growing* as well as the *mature* condition of animals, they would be of little value.

But we have seen that natural means of judging do exist, and although they cannot be easily understood without much observation and practice, yet, by practice, they can be acquired, and easily applied to the existing circumstances of the animal, whatever these may be. Any person, it is true, cannot at once perceive that their necessary tendency is to lead to a correct judgment. Long and careful personal observation is requisite to convince the mind of their value in that respect. Tuition, without practical observation, cannot of itself do it. It has been the study of nature, in short, which enabled men to establish these rules for his guidance; and as all the operations of nature are regulated by general laws, these rules must be of universal application. It is clearly established by observation, as an uniform princi-

ple of judgment, that when an ox, in a growing state, presents a certain degree of purity of breeding, a certain form of body, and a certain kind of handling of its skin, a certain result is undeviatingly exhibited in the mature state from these given premonitory symptoms. Should this result conduce to the acquisition of wealth, we are anxious to possess the growing animal which exhibits such favorable points; and, on the other hand, we are as anxious to avoid the possession of that animal which exhibits unfavorable points, unless at a very depreciated value. Now, it has been ascertained by experience, that pure breeding, perfect form, and fine touch, make the best mature animal. Hence *these points* will insure both the growing and the mature animal a ready market and a good price; and hence also, that breed which constantly presents these points, deserves, by its intrinsic worth, to be generally cultivated.

[From the Providence Journal.]

RHODE ISLAND SILK COMPANY.

Having watched with intense interest during the past year the incipent operations in the growth and manufacture of silk in this city, and having at different periods given descriptions of the machinery connected with its manufacture, which have been extensively copied, we could not have believed, had he not told us so, that any editor in our own neighborhood could have been "informed," within the last fortnight, "that several important improvements have been made recently in the looms for weaving silk, and that it is calculated, as soon as a sufficient quantity of cocoons can be obtained, the weaving of silk will be prosecuted on a more extensive scale than has been done heretofore in this country." But this is the language of one of the New Bedford papers, the Mercury we believe, while, in the same village where it is printed, the factory of Joseph Rotch, Esq. is turning out goods equal to the best Italian silk. If the editor has any fondness for beautiful machinery, perfect in its operation—if he would behold the manufacture of the most delicate material brought at once, without experience, to a high degree of perfection by the ingenuity and perseverance of a single mechanic—if he would love to contemplate the brightest prospect of wealth and comfort that has ever dawned upon the people of the United States, we commend him to a view of that establishment. The machinery which he will there find in operation was invented by Gamaliel Gay, whose name our country will ultimately have occasion to record among those of its most distinguished benefactors.

But we find there are many persons, men of business, among us, who are as unenlightened upon this subject as they were before it had become one of such engrossing interest; and some, who have expressed surprise on being recently informed that there was a Silk Factory in the very midst of our city. To such persons then, if they will take the trouble to read it, a history of the plans and operations of the "Rhode Island Silk Company," which was late the "Valentine Silk Company," was incorporated at the recent session of our Legislature, with a capital of $100-000. Their factory is situated upon Eddy Street, the next building to the old glass house. The machinery, with which it is nearly filled, is propelled by a six horse power steam engine. The steam is generated with the siftings of anthracite coal, at an expense of 33 cents per day. This, till recently, useless and refuse portion of the coal, is ignited and rendered about as valuable as any other, by the aid of Reynold's patent blowing apparatus.—While preparing their machinery and instructing their operatives in the art, they have manufactured from 16 to 1800 yds. of rich, heavy goods. The number of hands has recently been very much increased, and, with the additional power looms about to be put in, the company contemplate making from 300 to 400 yards of goods per week. Of course, as there is no domestic supply, they are compelled to manufacture foreign silk. Another year, however, they will probably derive a considerable amount of the raw material from their own plantation. This plantation is on the western border of the city, and consists of thirty six acres of land particularly well adapted to the growth of the mulberry tree, and is already in a high state of cultivation. Upon it there is a large well finished two story house, and a barn and granary—a cocoonery 150 feet long, built last spring, and about 16,000 mulberry trees of very vigorous growth, most of which are five years old, and the remainder four. From these trees it is estimated that an average amount of at least 2000 pounds of wound silk may be produced per year, for the next five years, or two ounces to a tree—and for the succeeding five years double the amount. This is a moderate estimate compared with the one made by the Boston Company, and, indeed, compared with the results of experience, of those who have been engaged in growing silk in Connecticut for many years. The company are about putting out 40,000 more trees, of three years' growth, in hedges, after the Italian mode. These, it is estimated, will yield an average rate of one ounce of wound silk to a tree per year. The total product of the farm in silk, according to this estimate, would be worth, at four dollars per pound $18,000. One half of this amount is allowed for attendance upon the cocoonery and winding the silk into a marketable state, leaving a nett profit of $9,000. In addition to this ought to be reckoned the value

of the crops of corn and potatoes which the best condition of the trees will require should be planted among them. With a liberal application of fish, which abound, as a manure, within less than a mile of the farm, it may, beyond doubt, be rendered much more productive than, in the above calculations, is anticipated, and by planting in hedge rows 100,000 more trees, which it is competent to sustain, it would of course yield a manifold increase of silk. On one side of the farm is a beautiful pond, from which the trees may be watered, by the aid of a force pump, in any period ofdrought.

The whole establishment of this Company is now in fine order, and is judiciously located and well arranged for the purpose of exhibiting to our farmers and manufacturers the mode of operating this important branch of business. The soil of Rhode Island is well adapted to the growth of the mulberry tree, and the very borders of the roads may be appropriated to this use. There can hardly be a limit assigned to the amount of wealth which would accrue to this State, should its population be generally engaged in the cultivation and manufacture of silk. We have taken much pains to ascertain, from persons long acquainted with silk growing in Connecticut, what are the actual profits of the tree, and it is our purpose to give the results of our inquiries at another time.

[From the New England Farmer.]

QUERIES RELATIVE TO THE CULTURE OF THE MULBERRY, &c.

Mr Fessenden:—

I have on my farm in Worcester county, about sixteen acres of what is commonly called brush pasture, on which I design to plant mulberry trees, as soon as it can be properly prepared. The soil is a sandy loam by no means poor; and, with the exception of here and there a spot, free from stones — producing white birches, from the size of a riding stick to four or five inches in diameter; and a few white oaks of about twenty years' growth, some of which are full twelve inches through.

Having had little experience in this business, and being in immediate want of information, I am induced to solicit it, through the medium of your excellent journal; and I have no doubt that you, Sir, or some of your more experienced correspondents, will afford me just the assistance I need, by publishing the best method of destroying the birch, and preparing the land for the reception of the mulberry trees. An Inquirer.

By the Editor.—A very good mode, as we should suppose, of clearing land of bushes, was originally published in the Baltimore Farmer, and republished in the New England Farmer, vol. xii. p. 334. It is as follows:—

"*Grubbing.*—The manner in which I cleared a piece of ground grown up with bushes and undergrowth of various sizes, from three to ten feet high, was with a pair of oxen and a chain of ten or twelve feet long, with one end attached to the yoke, and forming a noose with the other around as many of the sprouts as could be encompassed by it, which, when thus made fast, they drew out by the roots with great ease; it was in the Spring, while the ground was yet loose; it is probable the operation would not be so easy when the ground is dry and hard. Two active boys of fifteen years of age, will clear more ground in this way than ten men will grub out in the ordinary method with mattocks."

With regard to preparing the land and the culture of the mulberry, Mr Cobb says: "The ground should be ploughed the preceding fall, and again ploughed two or three times in the spring, and made light and friable; two or three dressings, with manure well ploughed in, would be of essential service; the ground may be levelled with a hoe or rake, and the seed sown in drills about the first of May, much in the same way as our farmers sow carrots. The weeds must be carefully destroyed, and in dry times watering will be beneficial." [See "Cobb's Silk Manual," pp. 12, 13.]

Mr Kenrick says:—"The seeds of the mulberry are obtained by washing the bruised pulp of thoroughly ripe fruit; they are carefully dried, and sown early in May, in a rich, fresh, and well prepared soil, in drills or rows two feet asunder, and at an average distance of about an inch. Cover the seed but half an inch deep, and stamp or roll the ground immediately, that the earth may retain sufficient moisture at its surface, &c. [See "Kenrick's American Silk Grower's Guide," p. 37, &c. Also "Fessenden's Silk Manual," p. 86.]

For transplanting mulberry trees for standards, hedges, &c. the same works may be consulted, and as they are short it is not necessary to refer to particular pages.

The Northampton Republican says:—"We understand that Mr William Clark, Jr., of this town, has contracted to plough upwards of two hundred acres for the Silk Company. Mr C. has in use several of "Howard's Hingham Ploughs," which do the work well, and require less team than any in use.

We understand (says the Pawtucket Chronicle) that a gentleman of the South has purchased part of Seekonk Plains, and intends to cultivate it for the purpose of raising mulberry trees. He will set out sixty thousand trees in the Spring.

The surplus revenue at this moment in the Treasury of the United States is just about sixteen millions.

RAISING COCOONS.

The people in many parts of New England, in fact of many of the other States, are turning their attention to this lucrative business. The Northampton Courier is zealous in the cause, and recommends that the Silk business be prosecuted in this country, by having it systematized as in France and Italy. Raising the cocoons is one branch, and not an expensive, but rather a simple process. Mulberry trees can be had at a trifling cost, and when two or three years old, will furnish abundant food for worms. They need occupy no ground which could be appropriated to other uses. They can be planted by the sides of fences in rows all about a farmer's homestead. Even planted so close as to form an impervious and beautiful hedge — a valuable substitute for wooden fences.

When the worms are hatched from the eggs, a portion of the barn or wood-house can be appropriated to feeding them. About six weeks only are occupied in the process, and the leaves can be plucked, and all needed attentions given the worms, by young boys or girls, with very little experience. After the feeding is over, and they begin to wind their cocoons, they require no farther attention. The work is infinitely more agreeable, as well as lucrative, than the sedentary employment of covering buttons, or even working palm leaf hats or straw braiding.

When the cocoons are wound, they can find a ready cash market. The large establishments which are coming into existence in this country, both for raising worms and for winding and weaving the silk, will consume more than can be had for twenty years. In France and Italy, the leaves are furnished by one class of persons, another buys them and feeds the worms, while others purchase the cocoons and wind them for a fourth class, who manufacture the silk.

Cocoons are sold as other commodities are, carried into market by the peasantry every morning, where purchasers are ever ready to secure a good article. We earnestly urge upon every farmer to plant mulberry trees and furnish a healthy and lucrative employment to his little ones.—*Bangor Mechanic and Farmer.*

PROVIDENCE SILK MANUFACTURING COMPANY.—This Company, which was late the "Valentine Silk Company," was incorporated at the recent session of our Legislature, with a capital of $100,000. Their factory is situated upon Eddy street, the next building to the old glass house. The machinery, with which it is nearly filled, is propelled by a six horse power steam engine. The steam is generated with the siftings of anthracite coal, at an expense of 33 cents per day. This (till recently) useless and refuse portion of the coal, is ignited and rendered about as valuable as any other, by the aid of Reynold's patent blowing apparatus. While preparing their machinery and instructing their operatives in the art, they have manufactured from 16 to 1800 yards of rich, heavy goods. The number of hands has recently been very much increased, and with the additional power looms about to be put in, the company contemplate making from 300 to 400 yards of goods per week. Of course, as there is no domestic supply, they are compelled to manufacture foreign silk. Another year, however, they will probably derive a considerable amount of raw material from their own plantation. This plantation is on the western border of the city, and consists of thirtysix acres of land particularly well adapted to the growth of the mulberry tree, and is already in a high state of cultivation. Upon it there is a large well finished two story house, and a barn and granary — a cocoonery 150 feet long, built last spring, and about 16,000 mulberry trees of very vigorous growth, most of which are five years old, and the remainder four. From these trees it is estimated that an average amount of at least 2000 pounds of wound silk may be produced per year, for the next five years, or two ounces to a tree — and for succeeding five years double the amount. This is a moderate estimate, compared with the one made by the Boston Company, and, indeed, compared with the results of experience, of those who have been engaged in growing silk in Connecticut for many years. The company are about putting out 40,000 more trees, of 3 years' growth, in nedges, after the Italian mode. These, it is estimated, will yield an average rate of one ounce of wound silk to a tree per year, for the next five years, or 2500 pounds per year. The total product of the farm in silk, according to this estimate, would be worth, at four dollars per pound, $18,000. One half of this amount is allowed for attendance upon the cocoonery and winding the silk into a marketable state, leaving a nett profit of $9,000. In addition to this, ought to be reckoned the value of the crops of corn and potatoes, which the best condition of the trees will require should be planted among them. With a liberal application of fish, which abound, as a manure, within less than a mile of the farm, it may beyond doubt be rendered much more productive than in the above calculations is anticipated, and by planting in hedge rows 100,000 more trees, which it is competent to sustain, it would, of course, yield a manifold increase of silk. On one side of the farm is a beautiful pond, from which the trees may be watered, by the aid of a force pump, in any period of drought.—*Providence Journal.*

Ripe Tomatoes sliced up, and fried in butter, are to many quite delicious.

BRIGHTON MARKET,—Monday, Dec. 5, 1835.

Reported for the Daily Advertiser & Patriot.

At Market 2725 Beef Cattle, 250 Stores, 2800 Sheep, 1100 Swine. Several lots of Beef Cattle, and about 340 Swine, were at market last week.

Prices—*Beef Cattle*—A decline has been submitted to, probably occasioned by the large number at market, we quote a few choice at 31s 6d prime at 30s good 26s; a 28s; two and three year old at 17s a 24s.

Barrelling Cattle—Dull. Many lots were barrelled by the Drovers. Some of the Barrellers have closed their fall business, and others unwilling to purchase heavy. We reduce our quotations to conform to sales; 23s a 24s for mess; 20s a 21 for No 1 and 17s 18s for No 2.

Stores—Dull. Yearlings at $4 a 5; two year old 6 50 a 13; three year old $12 a 21.

Sheep—We notice sales at 9s 3d; 10s, 6d, 12s 13s 6d 16s 6d. 18s and 19.

Swine—Dull. The market appears to be completely glutted; no lots were sold, for good reason, there were no purchasers at reduced prices; few lots were retailed at very uneven prices; viz. 4 1-2 a 5 1-2 for sows, and 5 1-2 a 6 1-2 for barrows.

VALUABLE NEW WORK ON SILK

American Silk Grower's Guide, is this day published at the office of the New England Farmer—being the art of growing the Mulberry and manufacture of Silk on the system of successive crops each season—by Wm. Kenrick, author of the New American Orchardist; 112 pp. price 42 cents, neatly bound in cloth. Booksellers and traders supplied on favorable terms. GEO. C. BARRETT.

FARM FOR SALE.

Situated in Leominster, County of Worcester, on the main road midway between the towns of Leominster and Fitchburg and lately occupied by Mr Henry Jackson, deceased. Said Farm contains about 76 acres of land, and has on it a house and barn in good repair, an orchard, good pasturage and wood lot. For further information apply to Mr Benjamin Peirce, near the premises — or

DR. J. B. S. JACKSON,
Dec. 9 5t No. 6, Bedford Place.

FARM TO LET IN MEDFORD

About 5 miles from Boston; containing 40 acres of excellent Land, well adapted to mowing, tillage and pasturage. Said farm has been heretofore improved as a milk farm.

Apply to Luther Angin, near Medford Bridge.

N. B. Adjoining the above farm is about the same number of acres of similar land, which may be had on application to NATHAN ADAMS, Esq.

Medford, Nov. 26, 1835. tf

Subscriptions and payments to the Silk Manual will be received by the following named

AGENTS.

New York—G C. Thorburn, 11 John-street.
Albany—Wm. Thorburn, 347 Market-street.
Philadelphia—D. & C. Landbeth, 85 Chesnut-street.
Baltimore—Publisher of American Farmer.
Cincinnati—S. C. Parkhurst, 23 Lower Market-street.
Flushing, N Y.—Wm. Prince & Sons, Prop. Lin. Bot. Gar.
West Bradford, Mass.—Hale & Co. Booksellers.
Middlebury, Vt.—Wight Chapman, Merchant.
Taunton, Mass.—Sam'l O. Dunbar, Bookseller.
Hartford—Goodwin & Co. Booksellers.
Newburyport—Ebenezer Stedman, Bookseller.
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Woodstock, Vt.—J. A. Pratt.
Bangor, Me.—Wm. Mann, Druggist.
Halifax, N. S.—P. J. Holland, Esq. Editor of Recorder.
St. Louis—Geo. Holton

PRICES OF COUNTRY PRODUCE.

CORRECTED WITH GREAT CARE, WEEKLY.

		From	To
Apples, Russetts and Baldwins.	barrel	1 50	1 75
Beans, white,	bushel	1 25	1 75
Beef, mess,	barrel	10 00	10 50
Cargo, No. 1.	"	8 00	8 50
prime,	"	6 50	7 00
Beeswax, (American)	pound	25	27
Butter inspected, No. 1,	"	17	23
Cheese, new milk,	"	8	9
Feathers, northern, geese,	"	46	50
southern, geese,	"	42	45
Flax, American,	"	9	10
Fish, Cod,	quintal	2 75	2 87
Flour, Genesee, cash	barrel	7 70	7 75
Baltimore, Howard street,	"	7 62	7 75
Baltimore, wharf,	"		7 50
Alexandria,	"	7 50	7 62
Grain, Corn, northern yellow	bushel	1 17	1 18
southern yellow	"	1 13	1 14
white,	"	1 12	1 13
Rye, northern,	"	95	1 00
Barley,	"	90	1 00
Oats, nor hern, (prime)	"	60	62
Hay, best English, per ton of 2000 lbs		22 00	25 00
eastern screwed,	"	20 50	21 00
hard pressed,	"	20 00	22 00
Honey,	gallon		
Hops, 1st quality	pound	13	14
2d quality	"	10	11
Lard, Boston, 1st sort,	"	12	12
southern, 1st sort,	"	11	12
Leather, slaughter, sole,	"	19	20
do. upper,	"	12	14
dry hide, sole,	"	19	21
do. upper,	"	18	20
Philadelphia, sole.	"	27	29
Baltimore, sole,	"	25	27
Lime, best sort,	cask	1 10	1 12
Plaster Paris, per ton of 2200 lbs.		3 00	3 50
Pork, Mass. inspect. extra clear,	barrel	20 00	21 00
Navy, mess,	"		
bone, middlings, scarce.	"		
Seeds, Herd's Grass,	bushel	2 25	2 50
Red Top,	"	75	90
Red Clover, northern,	pound	10	11
Silk Cocoons, (American)	bushel	2 75	3 00
Tallow, tried,	cwt.	8 50	9 00
Wool, prime, or Saxony Fleeces,	pound	65	75
American, full blood, washed,	"	55	65
do. 3-4ths do.	"	55	58
do. 1-2 do.	"	37	42
do. 1-4 and common	"	40	45
Native washed	"	38	60
Northern pulled. Pulled superfine,	"	55	60
1st Lambs,	"	50	53
2d do.	"	40	41
3d do,	"	30	35
1st Spinning,	"	48	50
Southern pulled wool is generally 5 cts. less per lb.			

PROVISION MARKET.

RETAIL PRICES.

Hams, northern,	pound	12	12
southern, none.	"	11	12
Pork, whole hogs,	"	7	8
Poultry,	"	10	14
Butter, (tub)	"	18	23
lump	"	22	25
Eggs,	dozen	25	25
Potatoes,	bushel	30	40
Cider,	barrel	1 25	1 75

ORDERS FOR PRINTING RECEIVED BY THE PUBLISHER.